

Date of Deposition:

04-16-01

A

PTO/SB/05 (03-01)

Approved for use through 10/31/2002. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**PATENT APPLICATION
TRANSMITTAL**

Attorney Docket No. 27211/04031

First Inventor JEFFREY C. DILL

Title Apparatus and Method of CTCM Encoding for
A Digital Communication System

Express Mail Label No. EL085013095US

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. ☒ Fee Transmittal Form (e.g., PTO/SB/17)
(Submit an original and a duplicate for fee processing)
2. ☒ Applicant claims small entity status.
See 37 CFR 1.27.
3. ☒ Specification [Total Pages 68]
(preferred arrangement set forth below)
- ☒ - Descriptive title of the invention
 - ☒ - Cross Reference to Related Applications
 - ☒ - Statement Regarding Fed sponsored R & D
 - ☒ - Reference to sequence listing, a table, or a computer program listing appendix
 - ☒ - Background of the Invention
 - ☒ - Brief Summary of the Invention
 - ☒ - Brief Description of the Drawings (if filed)
 - ☒ - Detailed Description
 - ☒ - Claim(s)
 - ☒ - Abstract of the Disclosure
4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets 22]
5. Oath or Declaration [Total Pages 5]
- a. ☒ Newly executed (original or copy)
- b. ☐ Copy from a prior application (37 CFR 1.63 (d))
(for continuation/divisional with Box 18 completed)
- i. ☐ **DELETION OF INVENTOR(S)**
Signed statement attached deleting inventor(s)
named in the prior application, see 37 CFR
1.63(d)(2) and 1.33(b).
6. ☐ Application Data Sheet. See 37 CFR 1.76

ADDRESS TO:Assistant Commissioner for Patents
Box Patent Application
Washington, DC 20231

7. ☐ CD-ROM or CD-R in duplicate, large table or
Computer Program (Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission
(if applicable, all necessary)
- a. ☐ Computer Readable Form (CRF)
- b. Specification Sequence Listing on:
- i. ☐ CD-ROM or CD-R (2 copies); or
- ii. ☐ paper
- c. ☐ Statements verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

9. ☒ Assignment Papers (cover sheet & document(s))
10. ☐ 37 CFR 3.73(b) Statement ☐ Power of
(when there is an assignee) Attorney
11. ☐ English Translation Document (if applicable)
12. ☒ Information Disclosure ☒ Copies of IDS
Statement (IDS)/PTO-1449 Citations
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503)
(Should be specifically itemized)
15. ☐ Certified Copy of Priority Document(s)
(if foreign priority is claimed)
16. ☐ Nonpublication Request under 35 U.S.C. 122
(b)(2)(B)(i). Applicant must attach form PTO/SB/35
or its equivalent.
17. ☐ Other:

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP)

of prior application No.:

Prior application information:

Examiner:

Group Art Unit:

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion of the disclosure is specifically omitted from the submitted application parts.

19. CORRESPONDENCE ADDRESS☒ Customer Number or Bar Code Label24024
(Insert Customer Number or Bar Code Label here)or ☐ Correspondence address below

Name WILLIAM E. ZITELLI

Address

City

State

Zip Code

Country

Telephone

216-622-8229

Fax

216-241-0816

Name (Print/Type)

William E. Zitelli

Registration No. (Attorney/Agent)

28,551

Signature

William E. Zitelli

Date

April 16, 2001

Burden Hour Statement. This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

FEE TRANSMITTAL for FY 2001

Patent fees are subject to annual revision

TOTAL AMOUNT OF PAYMENT	\$660.00	Application Number	Unknown
		Filing Date	April 16 2001
		First Named Inventor	Jeffrey C. Dill
		Examiner Name	Unknown
		Group Art Unit	
		Attorney Docket No.	27211/04031
		Express Mail Label No.	EL085013095US

METHOD OF PAYMENT		FEE CALCULATION (continued)																																																																																																																																																																																																																																					
1. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to: Deposit Account Number: 03-0172 Deposit Account Name: <input checked="" type="checkbox"/> Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17 <input type="checkbox"/> Applicant claims small entity status See 37 CFR 1.27 2. <input checked="" type="checkbox"/> Payment Enclosed: <input checked="" type="checkbox"/> Check in the amount of \$660.00		3. ADDITIONAL FEES																																																																																																																																																																																																																																					
FEE CALCULATION 1. BASIC FILING FEE <table border="1"> <thead> <tr> <th>Large Fee Code</th> <th>Entity Fee (\$)</th> <th>Small Fee Code</th> <th>Entity Fee (\$)</th> <th>Fee Description</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr><td>101</td><td>710</td><td>201</td><td>355</td><td>Utility filing fee</td><td>\$355.00</td></tr> <tr><td>106</td><td>320</td><td>206</td><td>160</td><td>Design filing fee</td><td></td></tr> <tr><td>107</td><td>490</td><td>207</td><td>245</td><td>Plant filing fee</td><td></td></tr> <tr><td>108</td><td>710</td><td>208</td><td>355</td><td>Reissue filing fee</td><td></td></tr> <tr><td>114</td><td>150</td><td>214</td><td>75</td><td>Provisional filing fee</td><td></td></tr> <tr><td colspan="5">SUBTOTAL (1)</td><td>\$355.00</td></tr> </tbody> </table>		Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description	Fee Paid	101	710	201	355	Utility filing fee	\$355.00	106	320	206	160	Design filing fee		107	490	207	245	Plant filing fee		108	710	208	355	Reissue filing fee		114	150	214	75	Provisional filing fee		SUBTOTAL (1)					\$355.00	<table border="1"> <thead> <tr> <th>Large Fee Code</th> <th>Entity Fee (\$)</th> <th>Small Fee Code</th> <th>Entity Fee (\$)</th> <th>Fee Description</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr><td>105</td><td>130</td><td>205</td><td>65</td><td>Surcharge - late filing fee or oath</td><td></td></tr> <tr><td>127</td><td>50</td><td>227</td><td>25</td><td>Surcharge - late provisional filing fee or cover sheet</td><td></td></tr> <tr><td>139</td><td>130</td><td>139</td><td>130</td><td>Non-English specification</td><td></td></tr> <tr><td>147</td><td>2,520</td><td>147</td><td>2,520</td><td>For filing a request for <i>ex parte</i> reexamination</td><td></td></tr> <tr><td>112</td><td>920*</td><td>112</td><td>920*</td><td>Requesting publication of SIR prior to Examiner action</td><td></td></tr> <tr><td>113</td><td>1,840*</td><td>113</td><td>1,840*</td><td>Requesting publication of SIR after Examiner action</td><td></td></tr> <tr><td>115</td><td>110</td><td>215</td><td>55</td><td>Extension for reply within first month</td><td></td></tr> <tr><td>116</td><td>390</td><td>216</td><td>195</td><td>Extension for reply within second month</td><td></td></tr> <tr><td>117</td><td>890</td><td>217</td><td>445</td><td>Extension for reply within third month</td><td></td></tr> <tr><td>118</td><td>1,390</td><td>218</td><td>659</td><td>Extension for reply within fourth month</td><td></td></tr> <tr><td>128</td><td>1,890</td><td>228</td><td>945</td><td>Extension for reply within fifth month</td><td></td></tr> <tr><td>119</td><td>310</td><td>219</td><td>155</td><td>Notice of Appeal</td><td></td></tr> <tr><td>120</td><td>310</td><td>220</td><td>155</td><td>Filing a brief in support of an appeal</td><td></td></tr> <tr><td>121</td><td>270</td><td>221</td><td>135</td><td>Request for oral hearing</td><td></td></tr> <tr><td>138</td><td>1,510</td><td>138</td><td>1,510</td><td>Petition to institute a public use proceeding</td><td></td></tr> <tr><td>140</td><td>110</td><td>240</td><td>55</td><td>Petition to revive - unavoidable</td><td></td></tr> <tr><td>141</td><td>1,240</td><td>241</td><td>620</td><td>Petition to revive - unintentional</td><td></td></tr> <tr><td>142</td><td>1,240</td><td>242</td><td>620</td><td>Utility issue fee (or reissue)</td><td></td></tr> <tr><td>143</td><td>440</td><td>243</td><td>220</td><td>Design issue fee</td><td></td></tr> <tr><td>144</td><td>600</td><td>244</td><td>300</td><td>Plant issue fee</td><td></td></tr> <tr><td>122</td><td>130</td><td>122</td><td>130</td><td>Petitions to the Commissioner</td><td></td></tr> <tr><td>123</td><td>50</td><td>123</td><td>50</td><td>Petitions related to provisional applications</td><td></td></tr> <tr><td>126</td><td>240</td><td>126</td><td>240</td><td>Submission of Information Disclosure Stmt</td><td></td></tr> <tr><td>581</td><td>40</td><td>581</td><td>40</td><td>Recording each patent assignment per property (times number of properties)</td><td></td></tr> <tr><td>146</td><td>710</td><td>246</td><td>355</td><td>Filing a submission after final rejection (37 CFR § 1.129(a))</td><td></td></tr> <tr><td>149</td><td>710</td><td>249</td><td>355</td><td>For each additional invention to be examined (37 CFR § 1.129(b))</td><td></td></tr> <tr><td>179</td><td>710</td><td>279</td><td>355</td><td>Request for Continued Examination (RCE)</td><td></td></tr> <tr><td>169</td><td>900</td><td>169</td><td>900</td><td>Request for expedited examination of a design application</td><td></td></tr> <tr><td colspan="5">Other fee (specify) _____</td><td></td></tr> <tr><td colspan="5">SUBTOTAL (3)</td><td>\$ 0</td></tr> </tbody> </table>		Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description	Fee Paid	105	130	205	65	Surcharge - late filing fee or oath		127	50	227	25	Surcharge - late provisional filing fee or cover sheet		139	130	139	130	Non-English specification		147	2,520	147	2,520	For filing a request for <i>ex parte</i> reexamination		112	920*	112	920*	Requesting publication of SIR prior to Examiner action		113	1,840*	113	1,840*	Requesting publication of SIR after Examiner action		115	110	215	55	Extension for reply within first month		116	390	216	195	Extension for reply within second month		117	890	217	445	Extension for reply within third month		118	1,390	218	659	Extension for reply within fourth month		128	1,890	228	945	Extension for reply within fifth month		119	310	219	155	Notice of Appeal		120	310	220	155	Filing a brief in support of an appeal		121	270	221	135	Request for oral hearing		138	1,510	138	1,510	Petition to institute a public use proceeding		140	110	240	55	Petition to revive - unavoidable		141	1,240	241	620	Petition to revive - unintentional		142	1,240	242	620	Utility issue fee (or reissue)		143	440	243	220	Design issue fee		144	600	244	300	Plant issue fee		122	130	122	130	Petitions to the Commissioner		123	50	123	50	Petitions related to provisional applications		126	240	126	240	Submission of Information Disclosure Stmt		581	40	581	40	Recording each patent assignment per property (times number of properties)		146	710	246	355	Filing a submission after final rejection (37 CFR § 1.129(a))		149	710	249	355	For each additional invention to be examined (37 CFR § 1.129(b))		179	710	279	355	Request for Continued Examination (RCE)		169	900	169	900	Request for expedited examination of a design application		Other fee (specify) _____						SUBTOTAL (3)					\$ 0
Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description	Fee Paid																																																																																																																																																																																																																																		
101	710	201	355	Utility filing fee	\$355.00																																																																																																																																																																																																																																		
106	320	206	160	Design filing fee																																																																																																																																																																																																																																			
107	490	207	245	Plant filing fee																																																																																																																																																																																																																																			
108	710	208	355	Reissue filing fee																																																																																																																																																																																																																																			
114	150	214	75	Provisional filing fee																																																																																																																																																																																																																																			
SUBTOTAL (1)					\$355.00																																																																																																																																																																																																																																		
Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description	Fee Paid																																																																																																																																																																																																																																		
105	130	205	65	Surcharge - late filing fee or oath																																																																																																																																																																																																																																			
127	50	227	25	Surcharge - late provisional filing fee or cover sheet																																																																																																																																																																																																																																			
139	130	139	130	Non-English specification																																																																																																																																																																																																																																			
147	2,520	147	2,520	For filing a request for <i>ex parte</i> reexamination																																																																																																																																																																																																																																			
112	920*	112	920*	Requesting publication of SIR prior to Examiner action																																																																																																																																																																																																																																			
113	1,840*	113	1,840*	Requesting publication of SIR after Examiner action																																																																																																																																																																																																																																			
115	110	215	55	Extension for reply within first month																																																																																																																																																																																																																																			
116	390	216	195	Extension for reply within second month																																																																																																																																																																																																																																			
117	890	217	445	Extension for reply within third month																																																																																																																																																																																																																																			
118	1,390	218	659	Extension for reply within fourth month																																																																																																																																																																																																																																			
128	1,890	228	945	Extension for reply within fifth month																																																																																																																																																																																																																																			
119	310	219	155	Notice of Appeal																																																																																																																																																																																																																																			
120	310	220	155	Filing a brief in support of an appeal																																																																																																																																																																																																																																			
121	270	221	135	Request for oral hearing																																																																																																																																																																																																																																			
138	1,510	138	1,510	Petition to institute a public use proceeding																																																																																																																																																																																																																																			
140	110	240	55	Petition to revive - unavoidable																																																																																																																																																																																																																																			
141	1,240	241	620	Petition to revive - unintentional																																																																																																																																																																																																																																			
142	1,240	242	620	Utility issue fee (or reissue)																																																																																																																																																																																																																																			
143	440	243	220	Design issue fee																																																																																																																																																																																																																																			
144	600	244	300	Plant issue fee																																																																																																																																																																																																																																			
122	130	122	130	Petitions to the Commissioner																																																																																																																																																																																																																																			
123	50	123	50	Petitions related to provisional applications																																																																																																																																																																																																																																			
126	240	126	240	Submission of Information Disclosure Stmt																																																																																																																																																																																																																																			
581	40	581	40	Recording each patent assignment per property (times number of properties)																																																																																																																																																																																																																																			
146	710	246	355	Filing a submission after final rejection (37 CFR § 1.129(a))																																																																																																																																																																																																																																			
149	710	249	355	For each additional invention to be examined (37 CFR § 1.129(b))																																																																																																																																																																																																																																			
179	710	279	355	Request for Continued Examination (RCE)																																																																																																																																																																																																																																			
169	900	169	900	Request for expedited examination of a design application																																																																																																																																																																																																																																			
Other fee (specify) _____																																																																																																																																																																																																																																							
SUBTOTAL (3)					\$ 0																																																																																																																																																																																																																																		
2. EXTRA CLAIM FEES <table border="1"> <thead> <tr> <th>Total Claims</th> <th>Extra Claims</th> <th>Fee from below</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr><td>45</td><td>-20 = 25</td><td>x 9 00</td><td>=225 00</td></tr> <tr><td>5</td><td>-3 = 2</td><td>x 40 00</td><td>=80 00</td></tr> <tr><td colspan="4">Multiple Dependent =</td></tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Large Entity Code</th> <th>Entity Fee (\$)</th> <th>Small Fee Code</th> <th>Entity Fee (\$)</th> <th>Fee Description</th> </tr> </thead> <tbody> <tr><td>103</td><td>18</td><td>203</td><td>9</td><td>Claims in excess of 20</td></tr> <tr><td>102</td><td>80</td><td>202</td><td>40</td><td>Independent claims in excess of 3</td></tr> <tr><td>104</td><td>270</td><td>204</td><td>135</td><td>Multiple dependent claim, if not paid</td></tr> <tr><td>109</td><td>80</td><td>209</td><td>40</td><td>** Reissue independent claims over original patent</td></tr> <tr><td>110</td><td>18</td><td>210</td><td>9</td><td>** Reissue claims in excess of 20 and over original patent</td></tr> <tr><td colspan="5">SUBTOTAL (2)</td></tr> </tbody> </table>		Total Claims	Extra Claims	Fee from below	Fee Paid	45	-20 = 25	x 9 00	=225 00	5	-3 = 2	x 40 00	=80 00	Multiple Dependent =				Large Entity Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description	103	18	203	9	Claims in excess of 20	102	80	202	40	Independent claims in excess of 3	104	270	204	135	Multiple dependent claim, if not paid	109	80	209	40	** Reissue independent claims over original patent	110	18	210	9	** Reissue claims in excess of 20 and over original patent	SUBTOTAL (2)					SUBTOTAL (2) \$305.00																																																																																																																																																																																		
Total Claims	Extra Claims	Fee from below	Fee Paid																																																																																																																																																																																																																																				
45	-20 = 25	x 9 00	=225 00																																																																																																																																																																																																																																				
5	-3 = 2	x 40 00	=80 00																																																																																																																																																																																																																																				
Multiple Dependent =																																																																																																																																																																																																																																							
Large Entity Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description																																																																																																																																																																																																																																			
103	18	203	9	Claims in excess of 20																																																																																																																																																																																																																																			
102	80	202	40	Independent claims in excess of 3																																																																																																																																																																																																																																			
104	270	204	135	Multiple dependent claim, if not paid																																																																																																																																																																																																																																			
109	80	209	40	** Reissue independent claims over original patent																																																																																																																																																																																																																																			
110	18	210	9	** Reissue claims in excess of 20 and over original patent																																																																																																																																																																																																																																			
SUBTOTAL (2)																																																																																																																																																																																																																																							

** or number previously paid, if greater. For Reissue, see above

* Reduced by Basic Filing Fee Paid

SUBTOTAL (3) \$ 0

SUBMITTED BY		Complete (if applicable)	
Name (Print/Type)	William E. Zitelli	Registration No. (Attorney/Agent)	28,551
Signature	<i>William E. Zitelli</i>	Telephone	216/622.8229
		Date	4-16-01

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

Burden Hour Statement This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231